

### **Remarks**

Claims 1-14 are currently pending in the patent application. For the reasons and arguments set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references. Applicant notes at the outset that the current state of the Final Office Action is improper and has resulted in Applicant being denied a fair opportunity to respond. In particular, the bases for the various rejections have not been made clear to Applicant. Specifically, the Examiner's rejections at times rely upon a combination of the Sih and Prysby references, while at other times fail to recite the Prysby reference at all. The distinction between the rejections that use the Prsyby reference and those that do not has not been explained. Moreover, there are discrepancies between what the Examiner has indicated as the bases for the rejections in the headings and the respective discussions (*i.e.*, one heading indicates a combination with the Prysby reference but no discussion thereof is provided; another heading indicates that the Prysby reference is not included, but the discussion relies upon the Prysby reference). Applicant respectfully submits that a clear issue has not been established between the Examiner and Applicant and that per M.P.E.P. § 706.07, the finality of the rejection should be withdrawn. Moreover, the conflicting bases for the rejections raises a serious issue as to whether the Examiner has merely identified elements in prior art without performing the necessary analysis of how the combinations would function and/or why the skilled artisan would implement the combination. Notwithstanding the problems with the rejections and in an effort to facilitate prosecution, Applicant has made efforts to interpret the Examiner's rejections as best can be determined.

In the Final Office Action dated March 28, 2008, the following rejections are present: claims 1, 6-7 and 9-11 stand rejected under 35 U.S.C. § 103(a) over the Sih reference (US Patent No. 6,608,858) in view of the Prysby reference (US Patent No. 6,888,878); claims 2-3 stand rejected under 35 U.S.C. § 103(a) over the Sih reference in view of the Ling reference (US Patent No. 6,363,102); claim 4 stands rejected under 35 U.S.C. § 103(a) over the Sih and Ling references in view of the Ishizu reference (US Patent Pub. No. 2002/0015438); claim 5 stands rejected under 35 U.S.C. § 103(a) over the Sih and Ling references in view of the Ishizu reference, and further in view of the Huang reference (US Patent No. 6,154,443); claims 2-3 stand rejected under 35 U.S.C. § 103(a) over the Sih

and Prysby references in view of the Ling reference; claim 4 stands rejected under 35 U.S.C. § 103(a) over the Sih, Prysby and Ling references in view of the Ishizu reference; claim 5 stands rejected under 35 U.S.C. § 103(a) over the Sih, Prysby, Ling and Ishizu references in view of the Huang reference. The drawings are objected to, with a request for corrected replacement drawing sheets.

With regard to the objection to the drawings for failing to show each element, Applicant respectfully submits that the Examiner's interpretation that 37 C.F.R. 1.83(a) is inconsistent with other portions of the U.S.P.T.O. rules and regulations. In support of Applicant's position reference is made to 35 USC §113, 37 C.F.R. 1.81(a) and M.P.E.P. §601.01(f), which indicate that "applicant shall furnish a drawing where necessary for the understanding of the subject matter sought to be patented." Thus, drawings are not needed at all unless they are necessary to understand the subject matter sought to be patented. In view of 35 U.S.C. §113, 37 C.F.R. 1.81(a) and M.P.E.P. §601.01(f), 37 C.F.R. 1.83(a) is applicable only when necessary for the understanding of the subject matter sought to be patented. Thus, the objection is improper because the Office Action has not indicated why one skilled in the art would not be able to understand the claimed invention in view of the current figures and specification.

Moreover, Applicant notes that the limitation "at the symbol level" is shown. For example, the figures show multiplying the input symbol signal with a conjugated previous input symbol signal (*see, e.g.*, FIG. 3 block 33 and relevant discussion). Accordingly, the figures provide explicit support for limitations directed to "at the symbol level." For at least the aforementioned reasons, Applicant respectfully submits that the objections are improper and requests that they be withdrawn.

With regard to the objection to the drawings under 37 C.F.R. 1.84(n), (o), Applicant respectfully submits that there is no valid basis for the objection. The Examiner suggests that a legend be added, without further elaboration. Applicant notes that the allegedly improper boxes each represent a functional block that is identified by both a numeral and text. Accordingly, to the best that can be ascertained from the objection, the legend would constitute a single statement that a box represents a functional block. Applicant submits that such a simple legend is not a necessary component for understanding of the drawing (1.84(o) applies where the legend is

necessary for understanding). Should the Examiner have envisioned a different (as yet undisclosed) legend is necessary, Applicant respectfully requests clarification regarding what the hypothetical legend should contain. Applicant would consider an amendment to the drawings upon such a clarification.

Moreover, Applicant submits the objection is improper as the drawings meet the requirements of 37 C.F.R. 1.84(n), (o). 1.84(n) refers to the use of nonconventional graphical symbols. As supported by the various patent applications, such as those presented by the Examiner, Applicant's use of boxes to represent various functional blocks is conventional. Moreover, each of the boxes is explicitly identified by a reference number. Applicant notes that 1.84(o) is only applicable where necessary to understand the invention and explicitly discourages the use of text in the drawings by stating that legends "should contain as few words as possible." Applicant respectfully submits that the Examiner has not shown why a legend is necessary to understand the invention. Accordingly, the objections are improper and Applicant requests that they be withdrawn.

With regard to the rejections of claims 1, 6-7 and 9-11 under 35 U.S.C. § 103(a) over the Sih reference (US Patent. No. 6,608,858) in view of the Prysby reference (US Patent No. 6,888,878), Applicant requests clarification of the rejection as the Examiner has presented two different discussions of an alleged combinations of the Sih and Prysby references.

In the first such discussion (at page 5 of the final office action), Applicant respectfully submits that no mention of the Prysby reference is made and that the rejection is improper for failing to provide a reason to modify the Sih reference. Regarding the rational to modify, the Examiner first states that no difference is seen between providing frequency offset compensation at the symbol level as opposed to at the sample level. Thus, the Examiner appears to assert that there is no support in the record for the skilled artisan to believe that one type compensation has a benefit relative to the other. Thus, the Examiner's reason to modify the Sih reference to implement a different type of compensation for the benefit of compensating for the channel improvements is either at odds with the previous assertion or relies upon an improper conclusory statement. Without support in the record for compensating at the symbol

level in the manner claimed are found in Applicant's specification, the Examiner appears to be relying upon improper hindsight reconstruction from Applicant's specification. Due to conflicting statements by the Examiner and the lack of support in the record to support the Examiner's alleged reason to implement the asserted combination, Applicant respectfully submits that the rejection cannot stand and requests that it be withdrawn.

In the second such discussion (at page 11 of the final office action), the Examiner attempts to correct alleged deficiencies in the Sih reference by adding elements of the Prysby reference relating to symbol level corrections. The Examiner's discussion fails to provide adequate details regarding how the asserted combination is to be implemented. The Examiner's explanation simply states that the combination is an incorporation of a feature from Prysby. No details are provided as to how the feature from Prysby would be incorporated into the receiver of Sih. Neither of the references appears to suggest that the two different compensation mechanisms would function together. Neither of the references (nor the Examiner) teaches or suggests how such a combination would be implemented. Without an analysis of such aspects and support thereof in the record, Applicant respectfully submits that the Examiner is merely identifying elements of the references and concluding that they would be combined in the manner taught by Applicant's specification. Per M.P.E.P. § 2142, such conclusory statements fail to establish a *prima facie* case for a 35 U.S.C. § 103(a) rejection. *See, also, KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (U.S. 2007) ("A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art.").

Further, the Prysby reference explicitly teaches away from the Examiner's asserted combination as Col. 2, lines 25-29:

no need exists for the complexities of combining at the symbol level. Therefore, the gains of diversity combining can be achieved for multipath signal reception without the need for symbol combining.

Accordingly, the rejections are improper as the teachings, when viewed as a whole, lead the skilled artisan away from the asserted combination. For at least the aforementioned reasons, Applicant respectfully submits that the rejections are improper and requests that they be withdrawn.

With respect to the rejection of claims 2-3 under 35 U.S.C. § 103(a) over the Sih reference in view of the Ling reference (US Patent No. 6,363,102), Applicant respectfully traverses the rejections. Applicant notes that no rejection for claim 1 has been presented that does not rely upon the Prysby reference. Accordingly, the deficiencies of the Sih reference (alleged to be fixed by the Prysby reference in various discussions) are not addressed in the rejection. Moreover, the Examiner's discussion mentions the Prysby reference in passing (although no specific details are provided). Thus, it is not clear what the combination is as it is not clear what references are being relied upon, what elements from the references are being implemented nor how the elements are being combined.

Moreover, the Examiner has improperly asserted that amplitude normalizer or coefficients are inherent features within a filter. While the relevance of "coefficients" is not readily ascertainable, Applicant submits that the Examiner has not properly applied the rules for establishing inherency as set out in M.P.E.P. § 2112. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference and cannot be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. No extrinsic evidence has been provided that supports the Examiner's contention that all filters necessarily contain amplitude normalizers. As such, the inherency assertion is improper and relies solely on a conclusory statement.

The Examiner appears to be taking official notice (as no support is provided for the assertion) that it is "notoriously well known in the art that in order to mitigate multi-path interference, it is imperative that an auto correlation be performed on a delayed signal and the signal itself." Per M.P.E.P. § 2144.03, the use of official notice should be rare when an application is under final rejection and it is not appropriate to take official notice of facts without citing a prior art reference unless the facts present an instant and unquestionable demonstration as being well-known. The basis for such reasoning must be set forth explicitly. An examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge. Thus, the Examiner has improperly concluded that the asserted facts are well known without

known without providing the requisite analysis and support. Pursuant to M.P.E.P. § 2144.03, Applicant respectfully requests that the Examiner provide documentary evidence in the next Office action if the rejection is to be maintained.

For at least the aforementioned reasons, Applicant respectfully submits that the rejections are improper and requests that they be withdrawn.

With specific regard to the rejection of claim 4 under 35 U.S.C. § 103(a) over the Sih and Ling references in view of the Ishizu reference (US Patent Pub. No. 2002/0015438), Applicant respectfully traverses the rejection. Applicant notes that no rejection for claim 1 has been presented that does not rely upon the Prysby reference. Accordingly, the deficiencies of the Sih reference (alleged to be fixed by the Prysby reference in various discussions) are not addressed in the rejection. Moreover, the Examiner's discussion mentions the Prysby reference in passing (although no specific details are provided). Thus, it is not clear what the alleged combination entails as it is not clear which references are being relied upon, which elements from the references are being implemented nor how the elements are being combined.

Moreover, the Examiner's asserted motivation for modifying the system of Sih as modified by Ling and as taught by Ishizu is illogical. The Examiner asserts that the reason to combine is for providing phase compensation. Applicant respectfully submits that the Sih and Ling references already teach phase compensation. As phase compensation is already taught by the Sih and Ling references, the skilled artisan would not be motivated to provide compensation for phase from yet another source.

For at least the aforementioned reasons, Applicant respectfully submits that a *prima facie* case of obviousness has not been presented and that the rejections are improper.

With regard to the rejection of claim 5 under 35 U.S.C. § 103(a) over the Sih and Ling references in view of the Ishizu reference, and further in view of the Huang reference (US Patent No. 6,154,443), Applicant respectfully traverses the rejection. As discussed above, the rejection improperly relies upon the Sih reference to teach correspondence to claim 1. Moreover, the rejection is improper for the reasons discussed in connection with claims 2-4. Applicant further submits that the Examiner's alleged combination now includes at least four different compensation elements, many of which would appear to be duplicative. Applicant respectfully submits that the skilled artisan would not be motivated,

nor understand how to combine, the four different components into a working system. Specifically, the references do not teach that the various elements plucked from the references by the Examiner are modular and could be implemented in connection with one another. Applicant respectfully submits that the rejection is not proper under 35 U.S.C. § 103(a) for failing to address how the elements would be combined to properly function.

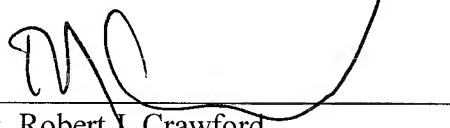
For at least the aforementioned reasons, Applicant respectfully submits that a prima facie case of obviousness has not been presented and that the rejections are improper.

Regarding the rejections of claims 2-3 under 35 U.S.C. § 103(a) over the Sih and Prysby references in view of the Ling reference; claim 4 under 35 U.S.C. § 103(a) over the Sih, Prysby and Ling references in view of the Ishizu reference; claim 5 under 35 U.S.C. § 103(a) over the Sih, Prysby, Ling and Ishizu references in view of the Huang reference, Applicant respectfully traverses the rejections. For the reasons presented above including the impropriety of the rejections of claim 1 (from which each of claims 2-5 depends), Applicant submits that the rejections are improper and requests that they be withdrawn.

In view of the remarks above, Applicant believes that each of the rejections/objections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063.

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